

April 3, 2002
Project No. 97664V3

Mr. Todd Croft
Nevada Division of Environmental Protection
1771 E. Flamingo Road, Suite 121-A
Las Vegas, Nevada 89119

PROVIDING

- Geotechnical Engineering
- Construction Materials Engineering
- Environmental Engineering
- Drilling Services

RE: *Results of Monthly Surface Water Sampling of the Las Vegas Wash at the Northshore Road Bridge*

Dear Mr. Croft:

Per your request, Geotechnical & Environmental Services, Inc. (GES) obtained a surface water sample from the Las Vegas Wash on March 26, 2002 near the Northshore Road Bridge. We sent this sample, under chain-of-custody protocol, to NEL Laboratories (NEL) for laboratory analysis of perchlorate. NEL reported a perchlorate concentration of 430 micrograms per Liter ($\mu\text{g/L}$). The NEL report is included with this letter, along with Perchlorate Summary Tables for 2001 and 2002.

At the time of sampling, heavy construction equipment was observed moving soil within the Wash and along the banks of the Wash. Activity was observed for an approximate observed distance of one-quarter mile, both upstream and downstream of the North Shore Road Bridge. A temporary concrete mixing facility was erected approximately 100-feet from the Wash, an estimated distance of 200-feet downstream of the Bridge. Information obtained from a site worker regarding the observed activities indicates the work currently consists of installing a temporary pipeline (3 months timeframe) to divert the Wash so that dams can be constructed. Our normal sampling point (approximately 50-feet downstream of the Bridge) was not accessible, so sampling occurred approximately 400-feet upstream from the Bridge. No construction activity was observed during the previous sampling event.

Our services were performed using that degree of care and skill ordinarily exercised under similar circumstances by reputable engineering firms in this or similar localities. No other warranty, either express or implied, is included or intended in this report.

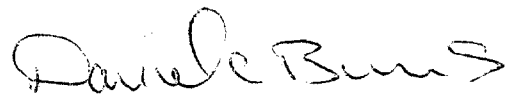
We appreciate this opportunity to provide our services. If you have any questions regarding these results, please feel free to call us at 365-1001.

Sincerely,

Geotechnical & Environmental Services, Inc.



Richard Cooke
Staff Geologist



Daniel C. Burns, C.E.M.*
#1692 (Expires 10/07/2003)
Project Manager

"I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances."

mam

Enc: 2001 & 2002 Perchlorate Summary Tables
NEL Analytical Report

Dist: 1 original mailed to addressee
1 faxed to addressee at 486-2863
1 faxed to Jeff Gibson, American Pacific Corporation
1 copy mailed to Kevin Mayer, USEPA SFD 72, 75 Hawthorne Street, San Francisco, CA 94105
1 copy to project file 97664V3

**Las Vegas Wash at Northshore Road Bridge
2001 Summary of Perchlorate Concentrations**

DATE SAMPLED	PERCHLORATE (µg/L)
1/25/01	280
2/27/01	350
3/27/01	480
4/26/01	320
5/29/01	240
6/27/01	400
7/25/01	550
8/27/01	420
9/27/01	460
10/25/01	420
11/27/01	810
12/27/01	440

**Las Vegas Wash at Northshore Road Bridge
2002 Summary of Perchlorate Concentrations**

DATE SAMPLED	PERCHLORATE (µg/L)
1/29/02	510
2/26/02	470
3/26/02	430

NEL LABORATORIES**Reno • Las Vegas
Phoenix • Boise****Las Vegas Division
4208 Arcata Way, Suite A • Las Vegas, Nevada 89030
702-657-1010 • Fax: 702-657-1577
1-888-368-3282**

Daniel Burns
Geotechnical & Environmental Services, Inc.
7150 Placid Steet
Las Vegas, NV 89119
TEL: 702-365-1001

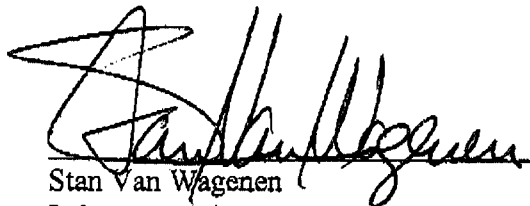
RE Project: FPF**Order No.: L0203343**

Dear Daniel Burns:

NEL Laboratories, Las Vegas received 1 sample on 3/26/02 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications unless noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.


Stan Van Wagenen
Laboratory Manager

4/1/02
Date

Certifications:	Reno	Las Vegas
Arizona	AZ0520	AZ0518
California	1707	2002
Idaho	Certified	Certified
Montana	Certified	Certified
Nevada	NV033	NV052
New Mexico	Certified	Certified
US Army Corps of Engineers		Certified

CLIENT: Geotechnical & Environmental Services, Inc
PROJECT ID: FPF
PROJECT #: 97664V3
MATRIX: AQUEOUS

CLIENT ID: North Shore Road Bridge
DATE SAMPLED: 3/26/02
NEL SAMPLE ID: L0203343-001A

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Reporting Limit</u>	<u>DF</u>	<u>Method</u>	<u>Prep Date</u>	<u>Analyzed</u>	<u>Analyst</u>
Perchlorate	430	µg/L	40	10	EPA 314	03/29/02	03/29/02	SAM-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 01-Apr-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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NEL LABORATORIES

APR-01-2002 MON 06:04 PM NEL LABORATORIES

FAX NO. 702 657 1577

P. 04/05

ANALYTICAL QC SUMMARY REPORT

CLIENT: Geotechnical & Environmental Services, Inc

Work Order: L0203343

Project: FPF

PERCHLORAT

Test Method: EPA 314

Sample ID: MB-R1045	SampType: MBLK	TestCode: PERCHLORA	Units: µg/L	Prep Date: 3/29/02	Run ID: SUB-1045						
	Batch ID: R_R1045	TestNo: EPA314		Analysis Date: 3/29/02	SeqNo: 12492						
Analytic	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Perchlorate	ND		4.0								

Qualifiers:

ND - Not Detected at the Reporting Limit

JL - MS or MSD outside acceptance limits. LCS acceptable.

J - This concentration is considered an estimate due to LCS failure.

C - Unspiked sample >5 times the amount spiked

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Page 1 of 1

Date: 01-Apr-02

ORIGINAL

LETTER OF TRANSMITTAL

GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

7150 Placid Street
Las Vegas, Nevada 89119
(702) 365-1001 (702) 341-7120 (FAX)

TO: NDEP Date: April 3, 2002
1771 E Flamingo Road, Ste 121A
Las Vegas, Nevada 89119 PROJECT: Las Vegas Wash @ Northshore Bridge
ATTN: Mr. Todd Croft GES PROJECT # 97664V3

WE ARE FORWARDING THE ITEMS LISTED BELOW VIA:

 MESSENGER PICK UP x U.S. MAIL "NEXT DAY"

<u>COPIES</u>	<u>DESCRIPTION</u>
<u>1</u>	<u>Results of Monthly Surface Water Sampling of the Las Vegas Wash at the Northshore</u>
<u> </u>	<u>Road Bridge</u>
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THESE ITEMS ARE SENT FOR: REVIEW COMMENT APPROVAL USE
 SIGN & RETURN OTHER:

REMARKS:

THIS MATERIAL SENT BY: Daniel C. Burns, C.E.M.
PLEASE SIGN AND RETURN ONE COPY OF TRANSMITTAL.

RECEIVED BY: TIME: DATE:

OTHER DISTRIBUTION:
1 copy mailed to Kevin Mayer @ USEPA SFD 72

If enclosures are not as noted, please notify us at once.